

METHODS FOR REGULATING GENE EXPRESSION

Abstract

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A method for regulating expression of a *tet* operator-linked gene in a cell of a subject is disclosed. In one embodiment, the method involves introducing into the cell a nucleic acid molecule encoding a tetracycline-controllable transactivator (tTA), the tTA comprising a Tet repressor operably linked to a polypeptide which directly or indirectly activates transcription in eucaryotic cells; and modulating the concentration of a tetracycline, or analogue thereof, in the subject. Alternatively, in another embodiment, the method involves obtaining the cell from the subject, introducing into the cell a first nucleic acid molecule which operatively links a gene to at least one *tet* operator sequence, introducing into the cell a second nucleic acid molecule encoding a tTA, to form a modified cell, administering the modified cell to the subject, and modulating the concentration of a tetracycline, or analogue thereof, in the subject. The first and second nucleic acid molecule can be within a single molecule (e.g., in the same vector) or on separate molecules.